PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	)	
	)	Group Art Unit: 1765
DeGendt *et al.*	)	
	)	Examiner: S. Ahmed
Serial No. 09/022,834	)	
	)	
Filed: February 13, 1998	)	Atty Docket No. 98-162; 97/17
	)	
For: **METHOD OF REMOVING ORGANIC CONTAMINANTS FROM A SEMICONDUCTOR SURFACE**	)	Confirmation No. 6138

REPLY TO EXAMINER'S ANSWER

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This Reply is in response to the Examiner's Answer mailed on May 30, 2002.

Claims 27-39 and 41-60 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kashiwase et al. (5,378,317) in view of Sehested (J. Phys. Chem.), with or without Kern (Handbook of Semiconductor Wafer Cleaning Technology) or Stanford *et al.* (U.S. Patent No. 5,244,000). Appellant maintains the prior arguments set forth in the Appeal Brief filed on November 3, 2003.

The present application satisfies 35 U.S.C. § 103 because the claims are not obvious in view of the cited art

In the broadest aspect, the claims are directed to a method of removing organic contaminants from a substrate comprising the use of a fluid comprising water, ozone, and an additive acting as a scavenger.

On page 6 of the Answer to the Appeal Brief, the Examiner states that the prior art teaches that ozone continuously decomposes, which results in the lowering of the concentration of ozone and an "obviously" lower cleaning efficiency. The prior art, however, fails to provide a basis for the Examiner's assumption that the decomposition of ozone would have a detrimental effect, or that adding acetic acid as a stabilizer would enhance the cleaning efficiency. Specifically, the prior art does not teach a comparison of *the rate of cleaning* with *the rate of ozone decomposition.* Thus, there is no basis for assuming that ozone would decompose faster than the methods of the invention would clean. Furthermore, if the rate of cleaning were faster than the rate of ozone decomposition, cleaning would be accomplished before any significant amount of decomposition occurred. In that

instance, there would be no detrimental effect caused by ozone decomposition. Concomitantly, the addition of a stabilizing agent, such as acetic acid, would have no significant effect on the cleaning efficiency. Therefore, the Examiner's allegation that the decomposition of ozone would "obviously" lower the cleaning efficiency is based on presumptions not found in the prior art (*i.e.*, that the rate of decomposition is such that it reduces the concentration of ozone before cleaning is completed and to such a level as to negatively affect cleaning).

For the reasons set forth above, the instant application is not obvious over the cited art and fulfills the requirement under 35 U.S.C. § 103. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. § 103.

SUMMARY

For the reasons set forth above, the invention is not obvious over the cited art. Applicants maintain, on the basis of the foregoing and in view of the arguments presented herein, reversal of each and every rejection is appropriate.

Respectfully submitted,

Date: 3-29-04

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